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EXAMINER

SOOHOO, TONY GLEN

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 08/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/973,811

Applicant(s)

BINDER ET AL.

Examiner

Tony G Soohoo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-18 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-18 and 20-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6/30/03.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 20-25, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a positive structural elements to permit a "" regulating flow of a primary product in a dosed fashion when the continuous product flow is established from the inlet to the outlet using the mixing tool.

At present the claim only points out "at least one outlet" in the independent/parent claims 22, 27. However, It is unclear how the mere provision of an "outlet" may provide such a "dosed fashion" operation during the continuous product flow since the term outlet suggest an opening or aperture for removal of product. Since 35 USC 112, 6<sup>th</sup> paragraph has not been invoked to suggest that the outlet is nothing more in structure than an outlet opening, of such a regulation of the rate of feed as pointed out in the narrative clause, and a operation of batch discharge closure in coordination with the feed passing through the inlet since there are no feed mechanisms or outlet closures being claimed as part of the device in operative cooperation to produce such an effect. With regards to claim 22 and claim 23 pointing out details to an intermediate floor which provides diversion of the product, this further description of the copeative outlet structure still does not provide sufficient structure to perform a dosed

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operation of the outlet. The intermediate floor, as claimed, encompasses in scope a diverting structure and is not directed to a selective blocking structure to perform a dosed operation.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 22, 24 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Haig 5324142 (newly cited).

Independent claims are 22 and 27. With regard to claim 27, the Haig reference discloses: A device for driving a vertical mixer 1 comprising:

at least one rotatable mixing tool 28, 28, provided in a housing 3 for building up a shear field in the product during an operating state;

at least one inlet at the upper opening of 1, 3 for a product to be mixed;

at least one outlet floor 11, 10 for regulating flow of a primary product in a dosed fashion via element lower rotor 24, and upper rotor 23, and intermediate floor 13 and opening 14 when continuous product flow is established from the inlet to the outlet using the mixing tool 28, 28, 28 since the mixing tool provides shear to prevent bridging of material so that it will flow down into the opening 14 and out the outlet 11, 10;

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and at least one drive 15 for the mixing tool, the mixing tool being arranged on a shaft and a product discharge device being provided at the outlet. With regards to claim 24, note gas port 9 provides additional point gas additives.

With regards to claim 22, the Haig reference discloses; A device for driving a vertical mixer 28, 28, comprising:

at least one rotatable mixing tool 28, 28 provided in a housing 1, 3 for building up a shear field in the product during an operating state:

at least one inlet for a product to be mixed located at the upper portion of 1, 3:

at least one outlet 10, 11, for regulating flow of a primary product in a dosed fashion when continuous product flow is established from the inlet to the outlet using the mixing tool 28, 28 to produce a shear field to prevent bridging of material so that it may continuously fall into the opening 14 and out the outlet 11, 10 in a dosed fashion by the dosed spaced opening of the rotor 24;

at least one drive 15 for the mixing tool. the mixing tool being arranged on a shaft 15 and a product discharge device 24, 23, 13, 14, being provided at the outlet: and above an opening 10, 11 of the outlet in a housing floor 5, 11 , an intermediate floor 13 provided with an opening 14, whereby the intermediate floor blocks off a cross-section of the opening 10, 11 of the outlet to divert the product from the right side of figure 1 to the left side of figure 1.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haig 5324142 (newly cited) in view of Jelks 4125063 (previously cited).

The Haig reference discloses in operation of the device:

A method for driving a vertical mixer 28, 28 with at least one rotatable mixing tool 28 provided in a housing 1,3, , with at least one inlet for a product to be mixed at the top opening of 1,3, and having with at least one outlet 11, 10, and with at least one drive 15, comprising:

a filled the vertical mixer in an operating state,

a shear field being built-up in the product by the mixing tool 28, 28;

and establishing continuous product flow from the inlet of the product to be mixed as far as the outlet of the product to be mixed since the shear field produced by the mixing tool 28, 28 is rotated to prevent bridging of material so that it will constantly fall and flow into the opening 14, 11, 20, so that the flow of the primary product can be regulated in a dosed fashion at the outlet 11, 10.

The Haig reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of "continuously completely filling the vertical mixer in an operating state". Haig shows at least the device should be filled prior to operation.

The reference to Jelks teaches a hopper 12 including a funnel 13 which is which provides a source of material for the inlet of the continuous metering device 14, The

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hopper is large enough so that it provides sufficient continuous source for the continuous screw fed device for mixing in the housing 32.

The teaching of Jelks teaches that one may provide a funnel and screw feed device for continuous feed of material into a container without the need for a batch filling of the inlet opening to the mixer housing, see column 2, lines 29-34, and constantly filled at a rate in relation to the speed of dispensing to provide a desired retention time as it is stirred via a mixer sweep arm 38 within the reactor vessel 33, see column 3, lines 8-19. Furthermore, Jelks teaches that the material may be dispensed in a batch manner via an automatic blow valve 54, which operates intermittently so as to maintain pressure thereby dispensing material only upon sufficient pressure and stopping the dispensing of material upon insufficient reactor vessel pressure. Thereby the dispensing is in a batch dosed mode, although not a measured dosed mode.

In view of the teaching by Jelks, above, it is deemed that it would have been obvious to one of ordinary skill in the art to provide a continuous source of material feed at a measured continuous feed rate in consideration of the dispensing rate of material from the mixer housing such that one may not have to constantly put more material in to the vessel 1, 3 of Haig so that the device may be operated continuously.

With regards to the rate of constant feed such that it does not over fill housing with material, it is deemed that it would have been obvious to one of ordinary skill in the art to not provide feed of material at such a high rate such that there is a back up of material whereas a person having ordinary skill in the art or a mere mechanic in the art would understand that an excess of feed rate into an inlet may cause a backup of

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material out of the mixer chamber and thus is not desirable and inefficient in the provision of material into the mixer chamber.<sup>3</sup>

With regards to claim 12, the Haig reference teaches that agitator finger elements 28 are rotated to break up material, column 5, lines 20-30. However fails to point out what direction it is rotated. Whereas the step of rotating the mixing tool backwards is a mere reversal of operation, and whereby moving the tool either backwards or forwards will still produce an rotative step to prevent bridging and produce breakup of material, it is deemed that it would have been obvious to one of ordinary skill in the art to also provide the step of moving the agitator element in a backward rotation so as to provide an effective manner to break up the power material. It is noted that it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. In re Einstein, 8 USPQ 167.

With regards to claims 13-14, note that the provision of material from the motion of lower rotor 24 via the spaces between rotor 24 which accepts material from the opening of 14 provides dosing of material from the housing 10.

Note that claims 15-17, it is known in the art that dispensing devices may be used to feed material into an extruder, forage pellet press, an expander or a batch mixer so that further processing may be done upon the powder. Accordingly, it is deemed that it would have been obvious to one of ordinary skill in the art to provide a method step of using a extruder, forage pellet press, an expander or a batch mixer after the mixer/dispenser so that further processing may be done upon the powder.

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With regards to claim 18, note that the rotation of the blades would inherently produce centripetal effects upon the powder thereby causing the powder to be thrown outwards from blade and from the center of the hopper container 3 onto the inner wall of the housing container 3 and thus pressing the powder product by means of the mixing tool in a direction of an inner wall of the housing.

With regards to claim 26, note that powder is used in the device.

***Allowable Subject Matter***

7. Claims 20, 21, 23 and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. Applicant's arguments, see remarks, pages 9-11, filed 6/11/2003, with respect to the rejection(s) of claim(s) under Hess 1563281 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Haig .

***Conclusion***

9. Accordingly, this Office action is NON-FINAL.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following disclose dispensing elements with agitators element in the hopper:

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Sletto 817727, Van Der Lely et al 3129846, Linn 2503878, Harmos et al 2959893, Racouillat et al 875948, Saxlund 2795358, Pajot 5348195, 3075363, Anderson 1204111, Wilms et al 6123486, Flegel 1639370, Wilson 133911, Fr2678912.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G Soohoo whose telephone number is (703) 308-2882. The examiner can normally be reached on 7:00 AM - 5:00 PM, Tues. - Fri. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

12.

Tony G Soohoo

Primary Examiner

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TONY G. SOOHOO  
PRIMARY EXAMINER

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PRIMARY EXAMINER